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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/933,905	08/22/2001	Omar Alonso	19111.0051	7411

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EXAMINER
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NGUYEN, MERILYN P

ART UNIT	PAPER NUMBER
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2161

DATE MAILED: 08/26/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/933,905

Applicant(s)

ALONSO ET AL.

Examiner

Merilyn P. Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 12 July 2005.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1,3,4,7-10,12,13,16-19,21,22 and 25-27 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,3,4,7-10,12,13,16-19,21,22 and 25-27 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 August 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☒ Other: Detailed Action.

### **DETAILED ACTION**

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 07/12/2005 has been entered.

2. In response to the communication dated 07/12/02005, claims 1, 3-4, 7-10, 12-13, 16-19, 21-22 and 25-27 are pending in this office action as a result of the cancellations of claims 5-6, 14-15 and 23-24.

### ***Acknowledges***

3. Receipt is acknowledged of the following items from the Applicant:
- The applicant's amendments have been considered and made of record.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 1, 3-4, 7-10, 12-13, 16-19, 21-22 and 25-27 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 1, 10, and 19, these claims are being incomplete for omitting essential structural cooperative relationships of elements. The step of “generating an expanded query based on the received query” is connected to step “receiving from a user a search query requesting information” but not from the retrieving recommendation step. Since the retrieving at least one *recommendation* for *alternative search results relating to the received query* and not related to *the search results of the expanded query*. Clarification of the claims is suggested.

Regarding claim 1, line 6, claim 10, line 9 and claim 19, line 10, there is insufficient antecedent basis for “the search query”.

Regarding claim 1, lines 4-5, claim 10, lines 7-8, claim 19, line 8-9, a broad range or limitation together with a narrow range or limitation that falls within the broad range or limitation (in the same claim) is considered indefinite, since the resulting claim does not clearly set forth the metes and bounds of the patent protection desired. See MPEP § 2173.05(c). Note the explanation given by the Board of Patent Appeals and Interferences in *Ex parte Wu*, 10 USPQ2d 2031, 2033 (Bd. Pat. App. & Inter. 1989), as to where broad language is followed by “such as” and then narrow language. The Board stated that this can render a claim indefinite by raising a question or doubt as to whether the feature introduced by such language is (a) merely exemplary of the remainder of the claim, and therefore not required, or (b) a required feature of the claims. Note also, for example, the decisions of *Ex parte Steigewald*, 131 USPQ 74 (Bd. App. 1961); *Ex parte Hall*, 83 USPQ 38 (Bd. App. 1948); and *Ex parte Hasche*, 86 USPQ 481 (Bd. App. 1949). In the present instance, claims 1, 10, and 19 recites the broad recitation “the recommendation based on users search query logs and search pattern information”, and the claim also recites “recommendations...based on the users search query logs, user search patterns, and

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user profile information” which is the narrower statement of the range/limitation. Also, this claim is an omnibus type claim in that it fails to point out what is included or excluded by the claim language.

Regarding claim 7, there is insufficient antecedent basis for “claim 6”. Claim 6 has been cancelled.

Regarding claims 8-9 and 17-19, line 3, claims 26-27, line 4, there is insufficient antecedent basis for “a search query string”. It’s unclear whether this “a search query” string different than “a search query string” of the preamble.

Regarding claim 16, there is insufficient antecedent basis for “claim 15”. Claim 15 has been cancelled.

Regarding claim 25, there is insufficient antecedent basis for “claim 24”. Claim 24 has been cancelled.

### ***Claim Rejections - 35 USC § 101***

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

5. Claims 1, 3-4 and 7-9 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Regarding claims 1, 3-4 and 7-9, to be statutory a process must be directed to a practical application in the technological arts. The claimed method step of claim 1, 3-4 and 7-9 are directed to a method of searching. The claimed method of searching can be performed by a plurality of manual systems, which are unrelated or tight to a technical art, environment, or

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machine. The claim fails to transform subject matter to technical things. Applicant must use technology to achieve the function of the method steps to ensure the claimed invention is directed to statutory subject matter.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1, 3-4, 10, 12-13, 19, and 21-22 are rejected under 35 U.S.C. 103(a) as being unpatentable Pitkow (US 2002/0016786), in view of Kravets (US 6,363,377), and further in view of Simoudis (US 5,692,107).

Regarding claims 1, 10, and 19, Pitkow discloses a method of searching comprising the steps of:

- receiving from a user a search query requesting information (See paragraphs [0103], lines 3-4, and [0123], lines 6-8);
- retrieving at least one recommendation for alternative search results relating to the search query (See paragraphs [0100], [0103], lines 5-7, and [0123], lines 8-27), the recommendation based on search pattern information (See paragraphs [0100], [0101], lines 10-13, [0130], lines 12-21, and [0140]).

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- generating an expanded query based on the received query (See paragraphs [0103], [0104], and [0123], lines 8-27);
- performing a search using the expanded query to retrieve documents (See paragraph [0105]); and
- presenting the recommendation for alternative search results (See paragraph [0100], lines 7-8) and the retrieved documents (See paragraph [0105], lines 9-11, and also [0124], lines 16-20).

Pitkow discloses performing data mining using user search patterns (See paragraphs [0127-0128]), and user profile information (See paragraph [0122]) to generate a plurality of recommendations relating to search query strings based on the user search patterns, and user profile information (See paragraphs [0129-0130]);

- generating a data structure including the recommendations relating to search query strings [See [0096] and [0100], Pitkow et al.); and
- generating a text index based on information in the data structure (See paragraph [0133-0134] and claim 14, Pitkow et al.).

Pitkow is silent as to the recommendation is based on users search query log. On the other hand, Kravets teaches query expansion based on retrieving the recommendation of the prior search query keyword. It would have been obvious to one having ordinary skill in the art at the time of the invention was made to retrieve the recommendation based on users search query logs as suggested by Kravets. The motivation would have been to enhance the reliability of the search results by using more than one information resource for recommendation.

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Pitkow is silent as to store the generated recommendations in the database. On the other hand, Simoudis teaches performing data mining to generate recommendations and store them in the database (See Fig. 3, store predictive model 217, and column 5, lines 25-58, Simoudis et al.). It would have been obvious to one having ordinary skill in the art at the time of the invention was made to store the recommendations in the database as suggested by Simoudis. The motivation would have been available for future use.

Pitkow teaches the use of clustering the centroids (titles or contents of the documents) of different categories used for searching purpose into number of clusters (See paragraph [0138]). However, Pitkow does not teach generating and presenting thematic clusters relating to the retrieved documents, the thematic clusters generated by performing linguistic analysis of the retrieved documents using linguistic extraction features themes that describe the retrieved documents. Kravets, teaches generating thematic clusters relating to the retrieved documents (See col. 4, line 47 to col. 5, line 28, Kravets et al.) and presenting the thematic clusters (See col. 5, lines 23-28, Kravets et al.). It would have been obvious to one having ordinary skill in the art at the time of the invention was made to generate thematic clusters relating to the retrieved documents and present them to users as suggested by Kravets. The motivation would have been to return the most relevant themes or phrases by removing all the common stop-words from documents so that user easily review and select desired results (col. 4, lines 50-57, Kravets et al.).

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Regarding claims 3, 12, and 21, Pitkow/Kravets/Simoudis discloses wherein the recommendation is further based on user profile information (See paragraph [0123], lines 8-12, Pitkow et al.).

Regarding claims 4, 13, and 22, Pitkow/Kravets/Simoudis discloses wherein the user profile information comprises aggregate information (See paragraph [0120], Pitkow et al.).

7. Claims 7-9, 16-18, and 25-27 are rejected under 35 U.S.C. 103(a) as being unpatentable Pitkow (US 2002/0016786), in view of Kravets (US 6,363,377), further in view of Simoudis (US 5,692,107) and further in view of Hofmann (US 6,687,696).

Regarding claims 7, 16, and 25, Pitkow/Kravets/Simoudis discloses all the claimed limitation as set forth above. However, Pitkow/Kravets/Simoudis is silent as to disclose populating an initial data structure with recommendations relating to search query strings, including an equivalence table comprising a plurality of terms and/or phrases and equivalents thereof; converting the plurality of terms and/or phrases and equivalents thereof to eXtensible Markup Language format; and validating availability of the recommendations. On the other hand, Hofmann teaches populating an initial data structure with recommendations relating to search query strings, including an equivalence table comprising a plurality of terms and/or phrases and equivalents thereof (See Fig. 7, and Col. 6, line 38 to Col. 7, line 33, Hofmann); converting the plurality of terms and/or phrases and equivalents thereof to eXtensible Markup Language format (130, 131, Fig. 9, and col. 16, lines 29-47, Hofmann et al.); and validating availability of the recommendations (See col. 16, lines 57-67, Hofmann et al.). It would have

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been obvious to one having ordinary skill in the art at the time of the invention to populate a data structure including a table of terms or phrases and convert those terms or phrases to XML as suggested by Hofmann so that a fast, flexible search system would be provided. Populating table of terms or phrases in XML format would provide standardized format to all web-based search system. Moreover, having the ability of validating the recommendations would enhance the search ability so that resulting more accurate documents.

Regarding claims 8, 17, and 26, Pitkow/Kravets/Simoudis/Hofmann discloses wherein the step of retrieving at least one recommendation relating to a search query string comprises the steps of:

- parsing the received search query to generate a search query string (See paragraph [0103], lines 3-11, Pitkow et al.);
- searching the populated data structure using the search query string to find a key associated with at least one recommendation relating to the search query string (See paragraphs [0097], [0100], Pitkow et al.); and
- retrieving the at least one recommendation relating to the search query string using the key (See paragraph [0100], Pitkow et al.).

Regarding claims 9, 18, and 27, Pitkow/Kravets/Simoudis/Hofmann discloses wherein the step of retrieving at least one recommendation relating to a search query string comprises the steps of:

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- parsing the received search query to generate a search query string (See paragraph [0103], lines 3-11, Pitkow et al.);
- searching the populated data structure using the search query string to find a key associated with at least one recommendation relating to the search query string, and if the key is found, retrieving the at least one recommendation relating to the search query string using the key (See paragraphs [0097], [0100], Pitkow et al.); and
- searching the equivalence table of the populated data structure using the search query string to find an alternative key associated with at least one recommendation relating to the search query string, and retrieving the at least one recommendation for information using the alternative key, if the key is not found (See paragraphs [0100, 0101], Pitkow et al.).

### ***Response to Arguments***

8. Applicant's arguments filed on 07/12/2005 with respect to claims have been fully considered but they are considered moot in view of the new grounds of rejection.

### ***Conclusion***

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Turnbull US 2002/0103789 discloses interface and system for providing persistent contextual relevance for commerce activities in a networked environment.

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10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marilyn P Nguyen whose telephone number is 571-272-4026.

The examiner can normally be reached on M-F: 8:30 - 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Safet Metjahic can be reached on 571-272-4023. The fax phone numbers for the organization where this application or proceeding is assigned are 571-273-8300 for regular communications and 703-746-7240 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

*MN*

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August 19, 2005

*Frantz Coby*  
**FRANTZ COBY**  
**PRIMARY EXAMINER**